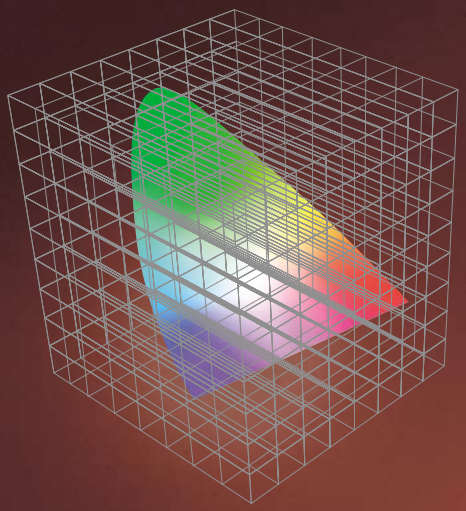
EIZO

ColorEdge™

COLOR CALIBRATION LCD MONITORS



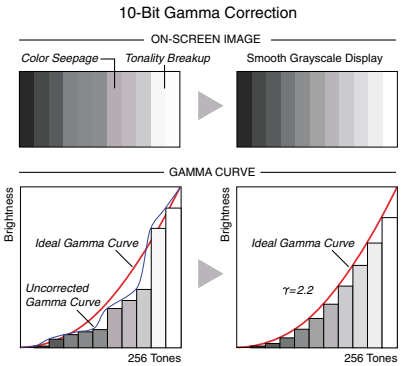
Color accuracy and calibration for turning creative vision into reality.

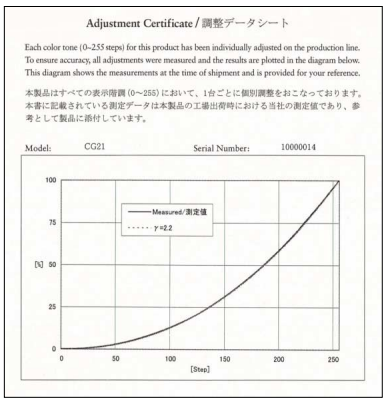
The Hardware: Consummate Performance and Functionality

FACTORY ADJUSTMENT OF GAMMA

Each ColorEdge monitor is adjusted at the factory to a gamma level of 2.2. This is accomplished by measuring the R, G and B gamma values from 0 – 255, then using the monitor's 10-bit Look-Up Table (LUT) with its 1,021-tone palette to select the 256 most appropriate tones to achieve the 2.2 value. Users can also set their own values from 1.8 to 2.6 with the ColorNavigator software.

Each monitor adjusted individually at the factory. (For illustrative purposes only. Actual adjustment is performed in a darkroom.)




Adjustment Certificate / 調整データシート
Each color tone (0–255 steps) for this product has been individually adjusted on the production line. To ensure accuracy, all adjustments were measured and the results are plotted in the diagram below. This diagram shows the measurements at the time of shipment and is provided for your reference.
本製品はすべての表示階調（0～255）において、1台ごとに個別調整をおこなっております。本書に記載されている測定データは本製品の工場出荷時における当社の測定値であり、参考として製品に添付しています。
Model: CG21
Serial Number: 10000014
Measured/測定値
γ=2.2
[%]
[Step]

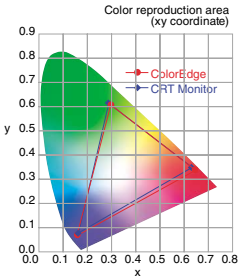
This is important because accurate, non-fluctuating gamma values are necessary for the proper display of color. If colors are not based on specific values and cannot be adjusted, images will be displayed differently by different monitors. ColorEdge monitors provide both precision and consistency, so graphics professionals can be sure that the final product will look exactly the way they want it to. In fact, each monitor comes with an adjustment certificate that certifies the measurement results of the gamma value.

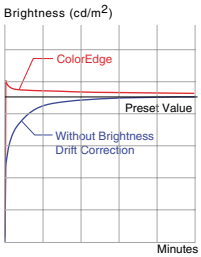
ACCURATE COLOR TEMPERATURE

Another important factor in achieving accurate, natural colors, especially for midtones, is setting the proper color temperature for white (white point). ColorEdge monitors are exceptionally versatile in this regard, providing color temperature adjustment from 4,000K to 10,000K in 500K increments (including 9,300K). This wide range ensures that users can achieve the optimum color temperature for any type of work, such as "paper white" for DTP.

COLOR AND CLARITY TO THE HIGHEST STANDARDS

The CG21 and CG19 employ a Super IPS (In-Plane Switching) panel, while the CG18 has a Dual-Domain IPS panel. Products of the latest LCD technology, these panels offer 400:1 (CG21 and CG18) and 450:1 (CG19) contrast ratios, high 250 cd/m² brightness, and a color reproduction range on par with CRT standards. They also feature wide 170° viewing angles with barely any color shift when seen from off-center. An EIZO-patented circuit stabilizes the brightness level after startup, preventing annoying brightness fluctuations.





ERGONOMIC THIN BEZEL DESIGN

Like all EIZO LCD monitors, these three models are ergonomically designed to provide a number of practical benefits. First is the considerable space saved on the desktop by the thin bezels on all four sides. This design also minimizes the distance between screens in multi-panel arrays. All monitors have height adjustable stands (CG19 and CG 18: 100 mm, CG21: 82 mm) and allow 40° tilt and 70° swivel, so every person can find the optimum viewing position. The panels also rotate 90° for portrait mode operation and can be removed from the stand for arm or wall mounting in accordance with VESA standards.

Note: Specialty software (sold separately) is necessary for viewing in portrait mode.

DIGITAL AND ANALOG SUPPORT

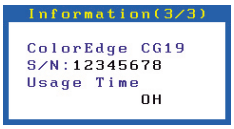
All ColorEdge monitors include two inputs for simultaneous connection of two computers and accept both digital and analog signals. Switching between the inputs can be done by simply pressing a button on the front panel.

FINE CONTRAST

All ColorEdge monitors can "fine-tune" the image for the type of application being used with EIZO's Fine Contrast function. Various modes including Custom, sRGB, and Calibration modes are selectable via a handy button on the front bezel. Each mode contains default settings for image parameters such as brightness, color temperature, gamma and saturation.

OSD INFORMATION MENU

The on-screen display lists important product information such as the product name, serial number, and total number of usage hours.



MACINTOSH ADC SUPPORT

ColorEdge monitors provide support for the Macintosh ADC (Apple Display Connector) port with an ADC-DVI converter (sold separately).

FULL INTERNATIONAL COMPLIANCE

Compliance with leading industry standards include TÜV/Ergonomics, EPA Energy Star and the new TCO'03. They also conform to EIZO's own strict Eco Products 2002 environmental criteria for design, manufacture, packaging and usage, including the introduction of lead-free solder and chrome-free steel plates.

SWOP CERTIFICATION

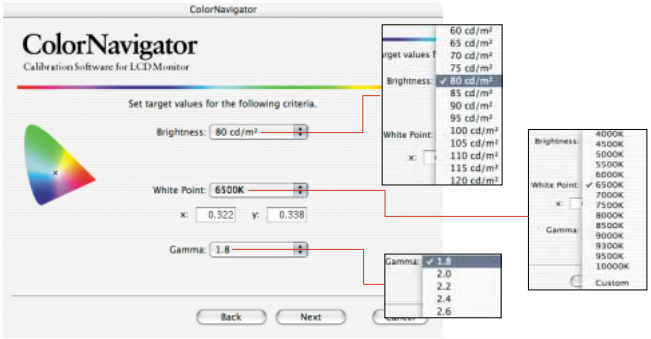
The ColorEdge CG21 is part of the SWOP-certified Remote Director – a monitor-based proofing system from Integrated Color Solutions, Inc. SWOP certification means graphics professionals can use this system in place of hardcopy proofs and perform all color checks on-screen.

Certified - January 2004

The Software: Extensive Calibration Capabilities

SIMPLE AND PRECISE CALIBRATION

Most calibration software requires adjusting the monitor in accordance with an OSD menu. This is not only time consuming, but also depends on the user's perception of color, making accurate calibration results difficult to achieve. ColorNavigator Ver. 2 is both simple and accurate — just set the target values for brightness, white point (color temperature or color coordinates) and gamma, then calibrate. The calibration process requires less than ten minutes and can be easily done without a team of specialists.



Target values for Brightness, White Point, and Gamma

Calibration Parameters

Brightness		60 cd/m² – 120 cd/m² in 5 cd/m² increments*
White Point	Color Temperature	4000K - 10000K in 500K increments including 9300K
	Color Coordinates	X Value, Y Value
Gamma		1.8, 2.0, 2.2, 2.4, 2.6

**60 cd/m² – 200 cd/m² adjustments in 5 cd/m² increments in Extra Mode.*

0.5ΔE DIFFERENCE

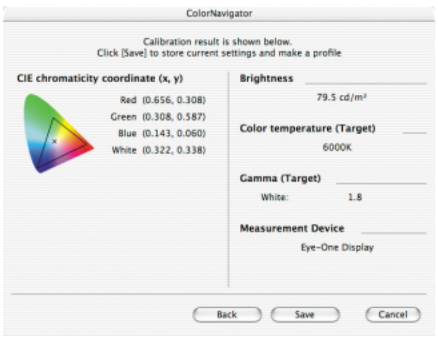
ColorNavigator Ver. 2 offers hardware calibration of ColorEdge monitors. The primary benefit of hardware calibration is that the monitor itself is adjusted so gradations in an image are not sacrificed in the calibration process. Software calibration on the other hand, conducts color adjustment on the graphics board, resulting in a loss of displayable color gradations. By controlling the 10-bit Look-Up Table of ColorEdge monitors, ColorNavigator Ver. 2 can adjust white point, color coordinates, and brightness without any reduction in gradations. When ColorNavigator is used with the CX1 calibrator or a calibrator from the Gretag-Macbeth Eye-One Series, the result is highly accurate colors with a ΔE* difference of less than 0.5.

Original **0.5ΔE** **1ΔE** **2ΔE** **3ΔE**

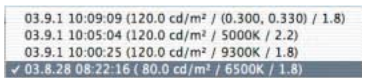
**ΔE: The color difference between the target white point and the monitor's white point.*

COLOR PROFILE GENERATION

ColorNavigator Ver. 2 can save up to 20 different calibration results. Any of these results can be used for setting the monitor or generating a ColorSync or ICM color profile for the computer's operating system. For example, if you use one monitor for both web design and printing, you can save a different calibration result for each task. When switching between tasks, just call up the appropriate result in ColorNavigator Ver. 2 and the settings will immediately change.

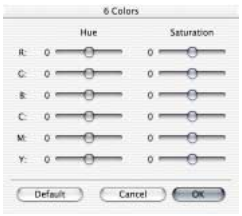


Calibration Results



Listing of Calibration Results

POST-CALIBRATION COLOR CORRECTION

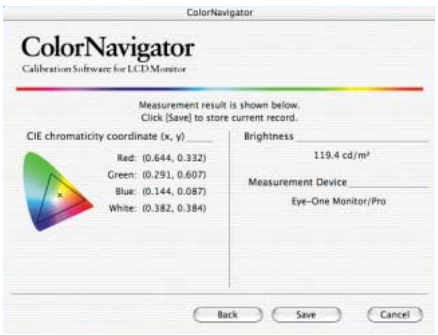


6-Color Adjustment

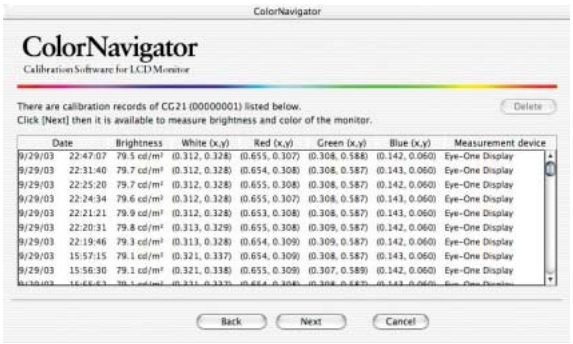
Sometimes in the printing process, achieving satisfactory color matching with printed material or another target reference is still difficult even after calibrating the monitor and using the color profile. For additional color manipulation, ColorNavigator Ver. 2 allows adjustment of red, green, blue, cyan, magenta, and yellow. The hue and saturation for all six colors can be adjusted independently.

COLOR COORDINATES AND BRIGHTNESS MEASUREMENT

ColorNavigator Ver. 2 includes a brightness and chromaticity measuring function that can take a reading of the monitor's brightness and color coordinates. Up to 20 results can be saved for continuous, long-term tracking of the monitor's performance.



Measurement Results



Measurement History

ColorNavigator Ver. 2 software is bundled with ColorEdge monitors. It is also available for download from the EIZO web site free of charge.
www.eizo.com/downloads/software/

System Requirements for ColorNavigator Ver. 2

Compatible Operating System	Macintosh	Windows
	Mac OS X 10.2 or later, OS 9.2.2	Windows 98SE/Me/2000/XP
Colors	32,000 minimum	
Resolution	800 x 600 minimum 1024 x 768 recommended minimum	
Additional Requirements	Power Macintosh G3, Power Mac G4, or G5 with built-in USB	· Pentium 300 MHz minimum · Available RAM 128 MB minimum · PC/AT compatible machine with built-in USB
	Two or more available USB ports	

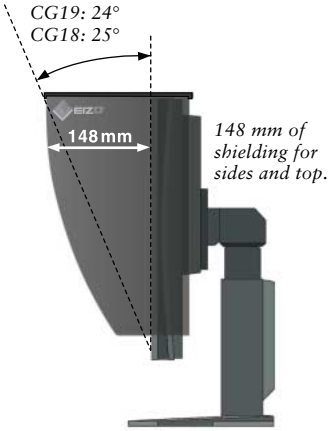
Accessories

CH1-A

MONITOR HOOD FOR GLARE REDUCTION

The new CH1-A monitor hood reduces light reflection for on screen color consistency. Size is adjustable to fit all current and past ColorEdge monitors.

Light shielding angle from above –
CG21: 23°
CG19: 24°
CG18: 25°



148 mm of shielding for sides and top.

The measuring device can be attached to the monitor and removed with the hood in place via a sliding top cover.

The inside of the hood is made with anti-glare material.

LS-HM1-D

DUAL HEIGHT ADJUSTABLE STAND

The LS-HM1-D holds two monitors of the same or different sizes, provides 6-stage height adjustment from 0 – 75 mm, supports portrait mode, and offers cable housing in the back.

**The LS-HM1-D supports all ColorEdge monitors. The CH1-A monitor hood cannot be affixed when monitors are mounted on this stand. Specialty software (sold separately) is necessary for viewing in portrait mode.*

FP-901, FP-701 & FP-601

PANEL PROTECTORS

To prevent dust and scratches, EIZO offers the FP-901, FP-701 and FP-601 protection sheets for the CG21, CG19 and CG18 that fit right over the screen surface and leave minimal trace of implementation.

ColorEdge™ CX1

COLOR CALIBRATOR

This compact colorimeter easily attaches to the screen and works with ColorNavigator software to take full advantage of the hardware capabilities of ColorEdge monitors.

COMPATIBLE COLOR MANAGEMENT SOLUTIONS

ColorNavigator Ver. 2 is compatible with the following GretagMacbeth Eye-One products:

Eye-One Monitor

Eye-One Monitor
Eye-One Publish
Eye-One Photo
Eye-One Beamer
Eye-One Publish with DC
Eye-One Photo with DC
Eye-One Display
Eye-One Pro*
Eye-One Pro with i1 Match*

** These models have been discontinued.*

GretagMacbeth™ i1

For more information on Eye-One products, visit www.i1color.com

The ColorEdge CX1 and Eye-One measuring devices require a USB connection.

Support

5 YEAR WARRANTY

EIZO and its authorized distributors offer a five year limited warranty for the ColorEdge CG21, CG19 and CG18 under the following principal terms and conditions.

5 Year Warranty

(1) The product shall be free from defects in material and workmanship for a period of five years, but subject to the usage time being 30,000 hours* or less from the date of purchase.

(2) The warranty period for the LCD panel and backlight is limited to three years from the date of purchase.

**30,000 hours spread across five years allows for over sixteen hours of use a day (16 × 365 × 5 = 30,000).*

For full warranty details, please see www.eizo.com/support/warranty/

Professional Color Quality with Precision Calibration

Professionals in the graphics, printing and digital imaging fields recognize the advantages of flat panel LCD monitors; however, there have been no products capable of meeting their high standards for color accuracy and management. With the ColorEdge series, EIZO has now remedied this situation. These high performance monitors are individually calibrated at the factory to provide total assurance of color precision. In addition, all models come with EIZO's proprietary ColorNavigator™ software, which works with the optional ColorEdge CX1 calibrator or GretagMacbeth Eye-One measuring devices to allow precise calibration of brightness, color temperature and gamma. With many other desirable features, including thin bezel design and digital/analog input, ColorEdge monitors make it very appealing for graphics professionals to make the switch to LCD monitors.

	ColorEdge™ CG21	ColorEdge™ CG19	ColorEdge™ CG18
Panel Size and Type	54 cm (21.3") TFT color LCD panel	48 cm (19") TFT color LCD panel	46 cm (18.1") TFT color LCD panel
Available Cabinet Colors	Gray, Black	Gray, Black	Gray, Black
Pixel Pitch	0.270 × 0.270 mm	0.294 × 0.294 mm	0.2805 × 0.2805 mm
Display Colors	16.77 million from a palette of 1.06 billion	16.77 million from a palette of 1.06 billion	16.77 million from a palette of 1.06 billion
Viewing Angles (H, V)	170°, 170°	170°, 170°	170°, 170°
Scanning Frequency (H, V)	Analog: 24 – 94 kHz, 49 – 86 Hz	Analog: 30 – 82 kHz, 49 – 86 Hz	Analog: 30 – 82 kHz, 49 – 86 Hz
	Digital: 31 – 76 kHz, 59 – 61 Hz (VGA Text: 69 – 71 Hz)	Digital: 30 – 65 kHz, 59 – 61 Hz (VGA Text: 69 – 71 Hz)	Digital: 30 – 65 kHz, 59 – 61 Hz (VGA Text: 69 – 71 Hz)
Native Resolution	1600 × 1200	1280 × 1024	1280 × 1024
Brightness	250 cd/m^2	250 cd/m^2	250 cd/m^2
Contrast Ratio	400:1	450:1	400:1
Dot Clock	Analog: 202.5 MHz, Digital: 162 MHz	Analog: 135 MHz, Digital: 108 MHz	Analog: 135 MHz, Digital: 108 MHz
Response Time	50 ms (typical)	25 ms (typical)	40 ms (typical)
Input Signals	RGB Analog, DVI Standard 1.0	RGB Analog, DVI Standard 1.0	RGB Analog, DVI Standard 1.0
Sync Formats	Separate, Composite	Separate, Composite	Separate, Composite, Sync-on-Green
Input Terminal	D-Sub mini 15 pin, DVI-I 29 pin	DVI-I 29 pin × 2 (switchable)	DVI-I 29 pin × 2 (switchable)
USB Ports	1 upstream	1 upstream, 2 downstream	1 upstream, 4 downstream
Active Display Size (H × V)	432 × 324 mm	376 × 301 mm	359 × 287 mm
Viewable Image Size	540 mm (diagonal)	481 mm (diagonal)	459 mm (diagonal)
Plug & Play	VESA DDC 2B	VESA DDC 2B	VESA DDC 2B
Screen Control	ScreenManager®, ColorNavigator,	ScreenManager®, ColorNavigator,	ScreenManager®, ColorNavigator,
	One Touch Auto Adjustment Function	One Touch Auto Adjustment Function	One Touch Auto Adjustment Function
Power Requirements	AC 100 – 120 V, 200 – 240 V: 50 / 60 Hz	AC 100 – 120 V, 200 – 240 V: 50 / 60 Hz	AC 100 – 120 V, 200 – 240 V: 50 / 60 Hz
Power Management	VESA DPMS, EIZO MPMS, DVI-DMPM	VESA DPM, DVI DMPM	VESA DPMS, EIZO MPMS, DVI-DMPM
Power Consumption	60 W	54 W	56 W
Power Save Mode	Less than 3 W	Less than 3 W	Less than 5 W
OSD Languages	English, French, German, Italian, Japanese, Spanish, Swedish	English, French, German, Italian, Japanese, Spanish, Swedish	English, French, German, Italian, Japanese, Spanish, Swedish
Dimensions (W × H × D)	With Stand: 472 × 459 – 541 × 208.5 mm	With Stand: 414 × 409.5 × 509.5 × 202.7 mm	With Stand: 399 × 404 – 504 × 203 mm
	Without Stand: 472 × 373 × 69 mm	Without Stand: 414 × 340 × 64 mm	Without Stand: 399 × 328 × 65 mm
Height Adjustment Range	82 mm	100 mm	100 mm
Net Weight	With Stand: 10.2 kg , Without Stand: 7.0 kg	With Stand: 8.1 kg, Without Stand: 5.8 kg	With Stand: 8.0 kg, Without Stand: 5.5 kg
Tilt / Swivel / Pivot	40° Up, 0° Down / 35° Right, 35° Left / 90°	40° Up, 1° Down / 35° Right, 35° Left / 90°	40° Up, 1° Down / 35° Right, 35° Left / 90°
Certifications and Standards	TCO'03 (gray), TCO'99 (black), TÜV/Ergonomics,	TCO'03 (gray), TCO'99 (black), TÜV/Ergonomics	TCO'03 (gray), TCO'99 (black), TÜV/Ergonomics
	(including ISO 13406-2), TÜV/GS, c-Tick, CE, CB,	(including ISO 13406-2), TÜV/GS, c-Tick CE, CB,	(including ISO 13406-2), TÜV/GS, c-Tick CE, CB,
	UL (cTÜVus), CSA (cTÜVus), FCC-B, Canadian	UL (cTÜVus), CSA (cTÜVus), FCC-B, Canadian	UL (cTÜVus), CSA (cTÜVus), FCC-B, Canadian
	ICES-003-B, TÜV/S, VCCI-B, EPA ENERGY STAR®,	ICES-003-B, TÜV/S, VCCI-B, EPA ENERGY STAR®,	ICES-003-B, TÜV/S, VCCI-B, EPA ENERGY STAR®,
	CCC, EIZO Eco Products 2002	CCC, EIZO Eco Products 2002	EIZO Eco Products 2002
Supplied Accessories	AC power cord, signal cables (D-Sub – D-Sub,	AC power cord, signal cables (D-Sub – DVI-I,	AC power cord, signal cables (D-Sub – DVI-I,
	D-Sub – DVI-I, DVI-D – DVI-D), USB cable,	DVI-D – DVI-D), USB cable, EIZO Utility Disk	DVI-D – DVI-D), USB cable, EIZO Utility Disk
	EIZO LCD Utility Disk (ColorNavigator software,	(ColorNavigator software, HTML user's manual,	(ColorNavigator software, HTML user's manual,
	HTML user's manual, ICC profile), adjustment	ICC profile) adjustment certificate, warranty	ICC profile) adjustment certificate, warranty
	certificate, warranty registration card	registration card	registration card
Warranty	Five Years	Five Years	Five Years

With current LCD technology, a panel may contain a limited number of missing or flickering pixels.

Specifications are subject to change without notice.

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